

(hereinafter Whyte). Claims 10 and 12 were rejected as being obvious from Whyte and Strieby U.S. Patent 1,547,242. Claims 9 and 15 were rejected as being obvious from Whyte and Dekker et al. U.S. Patent 4,513,315 (hereinafter Dekker). Claim 14 was rejected as being obvious from Whyte and Abraham WO 90/13950. In response, the independent claims 8, 12, and 13 have been amended to define that the carrier frequency is greater than 1 MHz for the telecommunications signal transmitted over the power line external to the building or premises.

Whyte describes a power line carrier communications system for automatic and remote reading of a consumer's watthour meter (48 in FIG. 1). The watthour meter is part of the power distribution system and is typically owned by the power company and located outside a consumer's premises. The Official Action suggests that Whyte's system includes a section of "broadband telecommunication network" (46, 68, 52). However, Whyte column 5, lines 35 to 38, says: "The central communication terminal 52 is linked to a computer 46 by a communication link 68 which can include either radio or standard telephone lines." Therefore, the telecommunication network in Whyte is not "broadband" as understood by a person of ordinary skill in the telecommunications art. As applied to data transmission, the term "broadband" denotes "transmission facilities capable of

handling frequencies greater than those required for high-grade voice communication." (See, for example, the definition of "broadband" on the attached page 116 of Rudolf F. Graf, Modern Dictionary of Electronics, 6<sup>th</sup> edition, Butterworth-Heinemann, Newton MA, 1997; see also applicant's specification, page 18 lines 23-24: "These signals may be narrow bandwidth e.g. telephony signals, or broadband e.g. television signals, ...") Moreover, Whyte in column 8, lines 13-24 further describes components for narrow-band transmission of the watt-hour meter data over the power lines:

The value of tuning capacitor 110 is chosen so as to form a parallel resonant circuit with the magnetic core 104 at the carrier communication signal frequency. This type of circuit provides substantial impedance at its resonant frequency and low impedance at frequencies greatly different from the resonant frequency. Thus, at the carrier communication signal frequency, typically between 5 kHz and 300 kHz, the parallel resonant circuit will present a high impedance and thereby develop the communication signal across the magnetic core 104 and tuning capacitor 110 circuit.

To further distinguish Whyte, and the combination of Whyte with Strieby or Abraham, the independent claims 8, 12, and 13 have been amended to define that the carrier frequency is greater than 1 MHz for the telecommunications signal transmitted over the power line external to the building or premises.

(Support for this limitation is found in applicant's specification, for example, on page 2 lines 16 to 22; page 3 lines 7-13; page 6 lines 16-17; page 16, lines 10-20; page 27 line 22 to page 28, line 4; and page 29, lines 16-20.) In contrast, Strieby fails to mention a value of carrier frequency, and Abraham on pages 4 and 12 merely discloses "communication frequencies" and "carrier frequencies" of "up to 1MHz ...."

Claims 9, 12 and 15 are further distinguished from Whyte, Strieby and Abraham by reciting a satellite receiver for receiving telecommunications signals from a satellite transmitter, wherein a telecommunications signal is transmissible from the satellite transmitter to the plurality of premises via the satellite receiver, the section of broadband telecommunications network and the power cables. The Official Action, on page 5, cites Dekker for disclosing a satellite receiver (1,2) for receiving telecommunications signals from a satellite transmitter for transmitting the telecommunications signal to plural premises. The Official Action recognizes that satellite transmitter/receivers provide efficient communication of signals over long or wide areas without the cumbersome use of cables. The Official action concludes: "Additionally, it would have been obvious to one of ordinary skill in the art to modify the combined systems of Whyte and Strieby to include a satellite

receiving means for receiving telecommunications signals from a satellite transmitter, as taught by Dekker, for the common advantage of re-transmitting telecommunication signals received from satellite sources to plural premises (i.e., receiving signals from alternative wireless source)." The applicant respectfully disagrees, because there is no suggestion in the prior art as a whole of the desirability of combining Whyte and/or Strieby with Dekker and modifying the combination in the fashion as suggested in the Official Action to arrive at applicant's claimed invention.

It is improper to attempt to establish obviousness by using the applicant's specification as a guide to combining different prior art references to achieve the results of the claimed invention. Orthopedic Equipment Co., Inc. v. United States, 702 F.2d 1005, 1012, 217 U.S.P.Q. 193, 199 (Fed. Cir. 1983).

Hindsight reconstruction, using the applicant's specification itself as a guide, is improper because it fails to consider the subject matter of the invention "as a whole" and fails to consider the invention as of the date at which the invention was made. The critical inquiry is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination. In re Fritch, 972 F.2d 1260, 1266, 23 U.S.P.Q.2d 1780, 1784 (Fed. Cir. 1992) ("It is impermissible to use

the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious."); Fromson v. Advance Offset Plate, Inc., 755 F.2d 1549, 1556, 225 U.S.P.Q. 26, 31 (Fed. Cir. 1985) (nothing of record plainly indicated that it would have been obvious to combine previously separate lithography steps into one process). See, for example, In re Gordon et al., 733 F.2d 900, 902, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984) (mere fact that prior art could be modified by turning apparatus upside down does not make modification obvious unless prior art suggests desirability of modification); Ex Parte Kaiser, 194 U.S.P.Q. 47, 48 (PTO Bd. of Appeals 1975) (Examiner's failure to indicate anywhere in the record his reason for finding alteration of reference to be obvious militates against rejection).

Neither Whyte et al. nor Strieby suggests anything about using satellite communication. Nor does Dekker suggest using power line communication. More importantly, Dekker appears entirely satisfactory for its intended purpose of distributing television and digital audio signals, nor would one of ordinary skill have thought that power-line carrier transmission external to the subscriber's premises could have been used for distributing Dekker's television and digital audio signals from a community satellite antenna and receiver to the subscriber's

premises due to the well-known problems of excessive attenuation and radiation from power lines for frequencies greater than 1 MHz. Dekker's television and digital audio signals to be distributed from the community satellite antenna and receiver include many conventional used and unused television channels, requiring bandwidth in the tens if not hundreds of megahertz, which one would expect to be distributed over coaxial cable in the conventional fashion. (See Dekker column 6 lines 8-30; claim 2, column 8, lines 16-21.)

In view of the cited references, the applicant is submitting additional claims that are similar to the allowed claims 16 to 19 but omit the recitation that the broadband telecommunications network is paralleling the electrical distribution line external to the buildings. These additional claims are particularly directed to the problem and solution discussed in the applicant's specification on page 4 line 19 to page 5 line 12:

The broadband telecommunications network may be a standard broadband distribution network, e.g., a coaxial, twisted pair or fibre cable. Such telecommunications networks are currently available in most major countries. However, typically, the greatest cost and inconvenience associated with such telecommunications networks is not the initial installation of the main network but the connection of the main network to the premises of users. The present invention allows the existing power distribution networks (which commonly feed into most

suitable premises) to be used to connect the existing telecommunications network to the desired premises. Thus the additional cost and inconvenience of installing further standard telecommunications network is avoided.

Typically, the distance between the existing telecommunications network infrastructure and the premises to which it is desired to be connected is short. Therefore, broadband telecommunications signals may be transmitted over the power transmission/distribution network without attenuation losses having any significant effect.

Because the cited reference neither recognize this problem nor suggest the applicant's solution, it is respectfully submitted that the new claims are allowable over the cited references.

In view of the above, it is respectfully submitted that the application is in condition for allowance. Reconsideration and early allowance are earnestly solicited.

Respectfully submitted,



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